

FIGURE 1

## Types of Bonds Occurring in a Mucous Gel

### 1. COVALENT BONDS

- glycoprotein subunits are linked primarily by intramolecular S-S bonds

### 2. IONIC BONDS

- mucin macromolecules have both positive and negative fixed charges, which are capable of interacting

### 3. HYDROGEN BONDS

- H-bonds link the oligosaccharide side-chains

### 4. VAN DER WAALS' FORCES

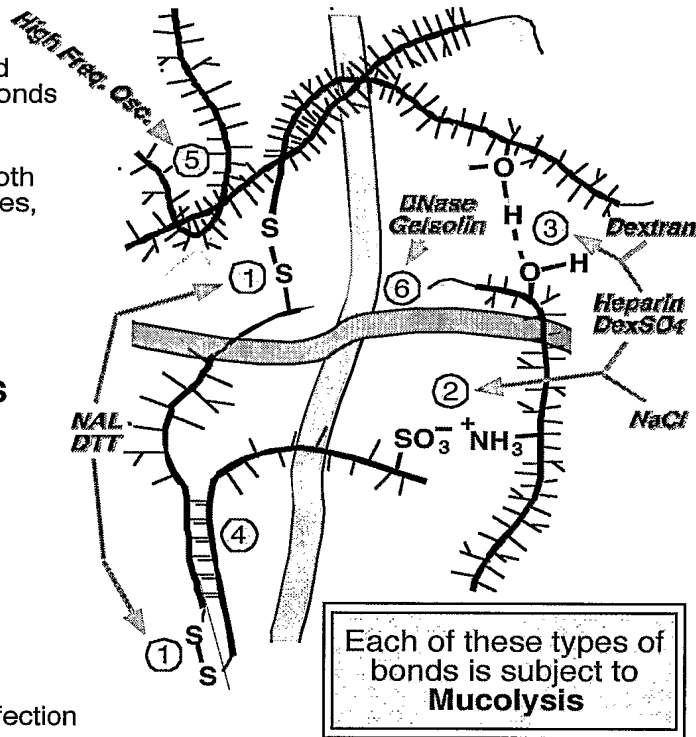
- interdigitation between oligosaccharide moieties may be important

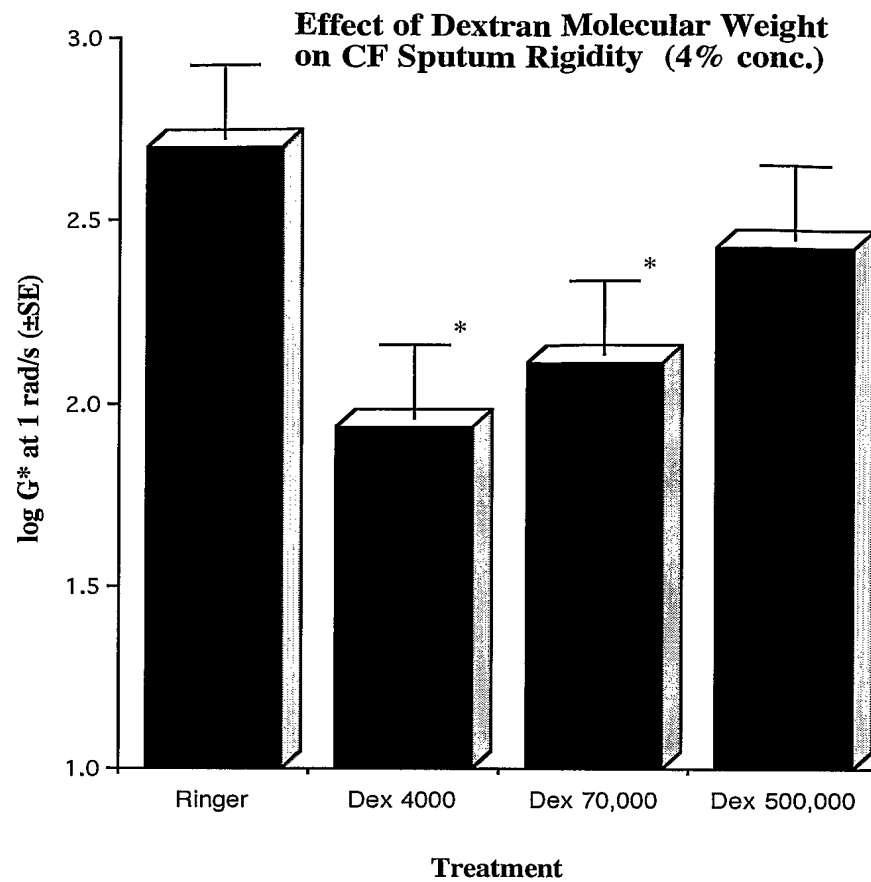
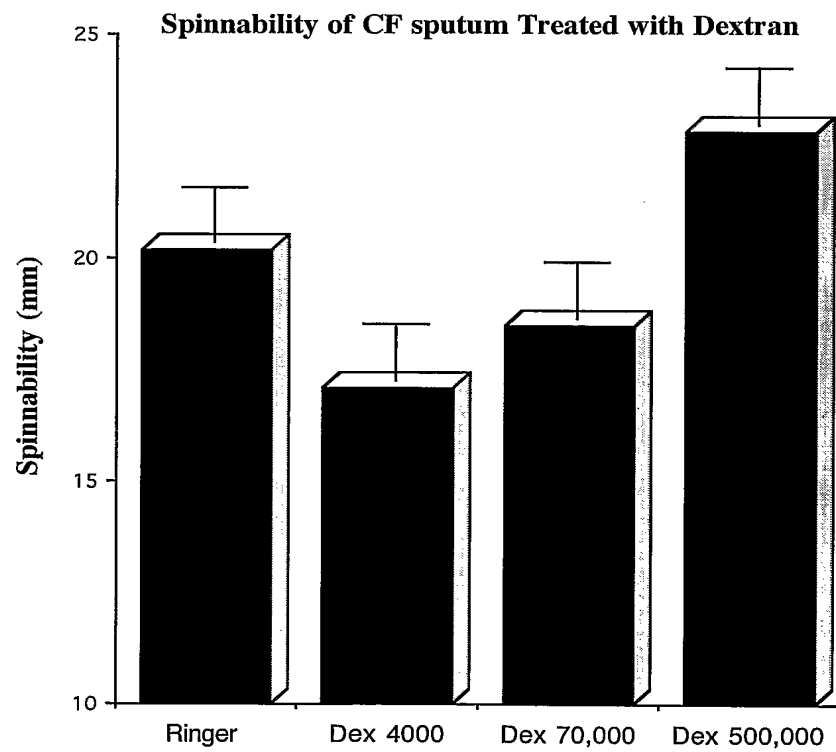
### 5. INTERMINGLING

- physical entanglements between mucin macromolecules

### 6. EXTRACELLULAR DNA & F-ACTIN

- parallel network formation in infection



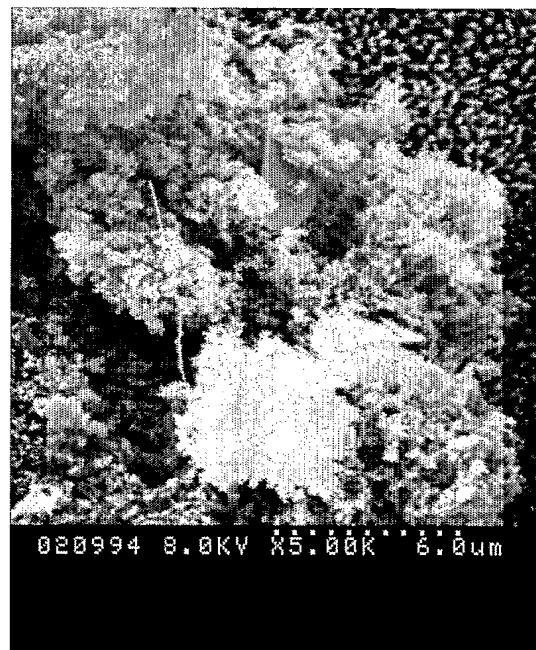
**FIGURE 2****A****B**

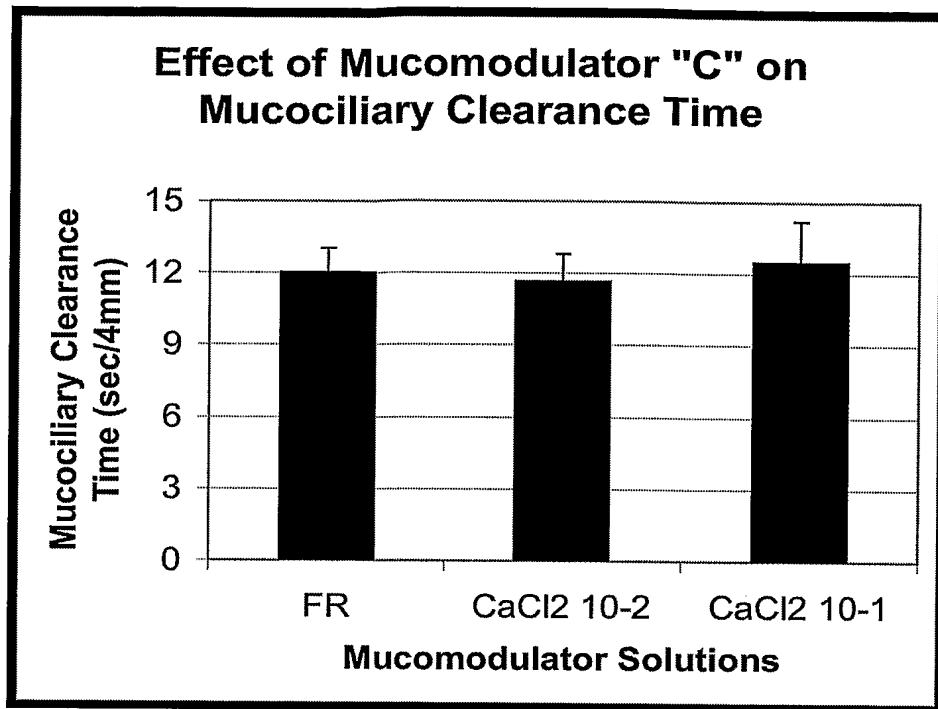
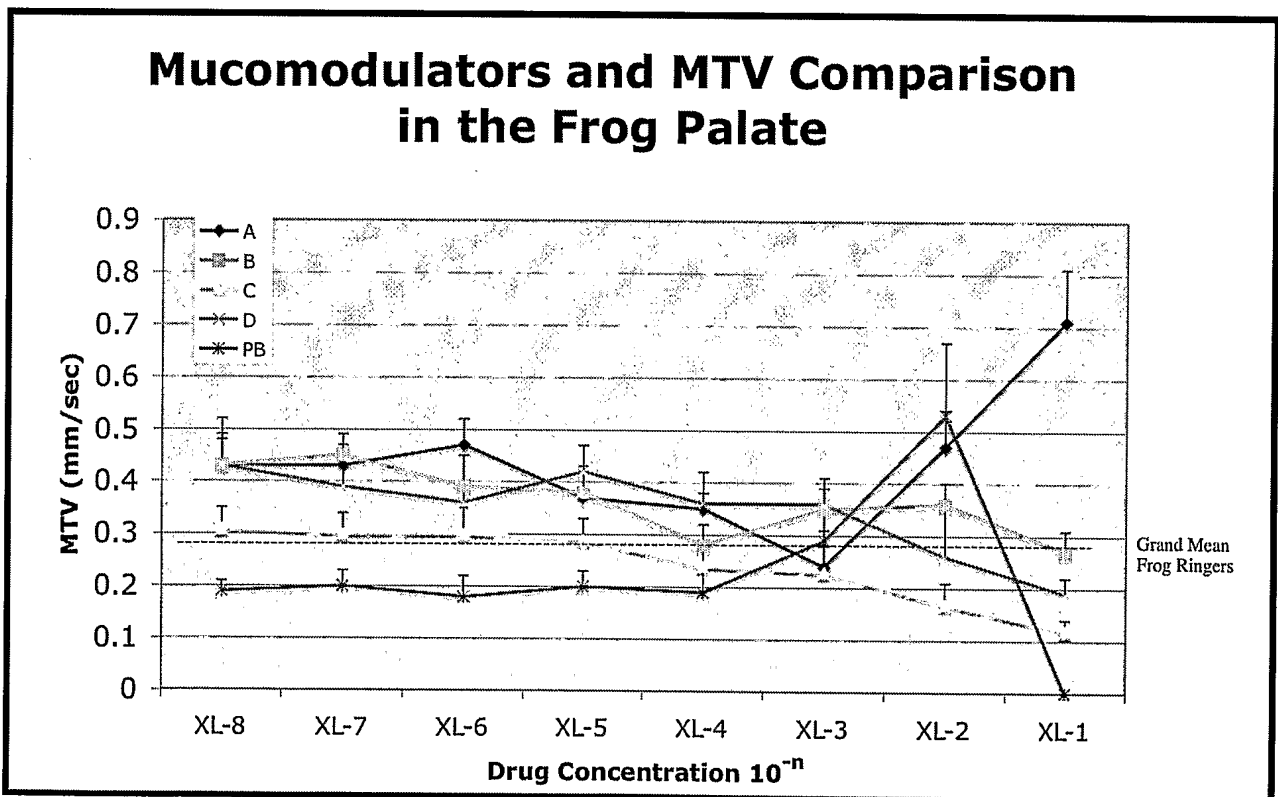
**FIGURE 3**

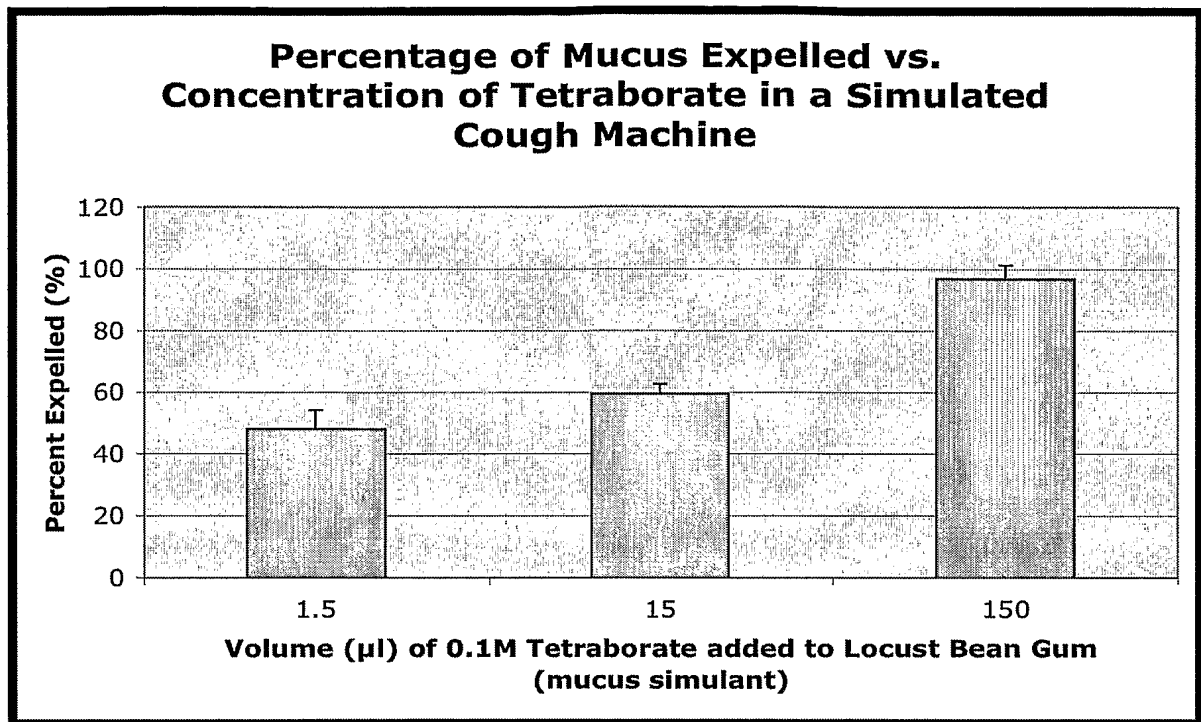
**A**

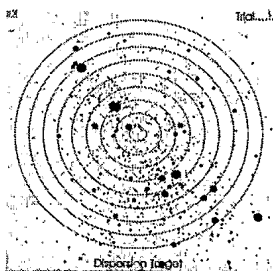
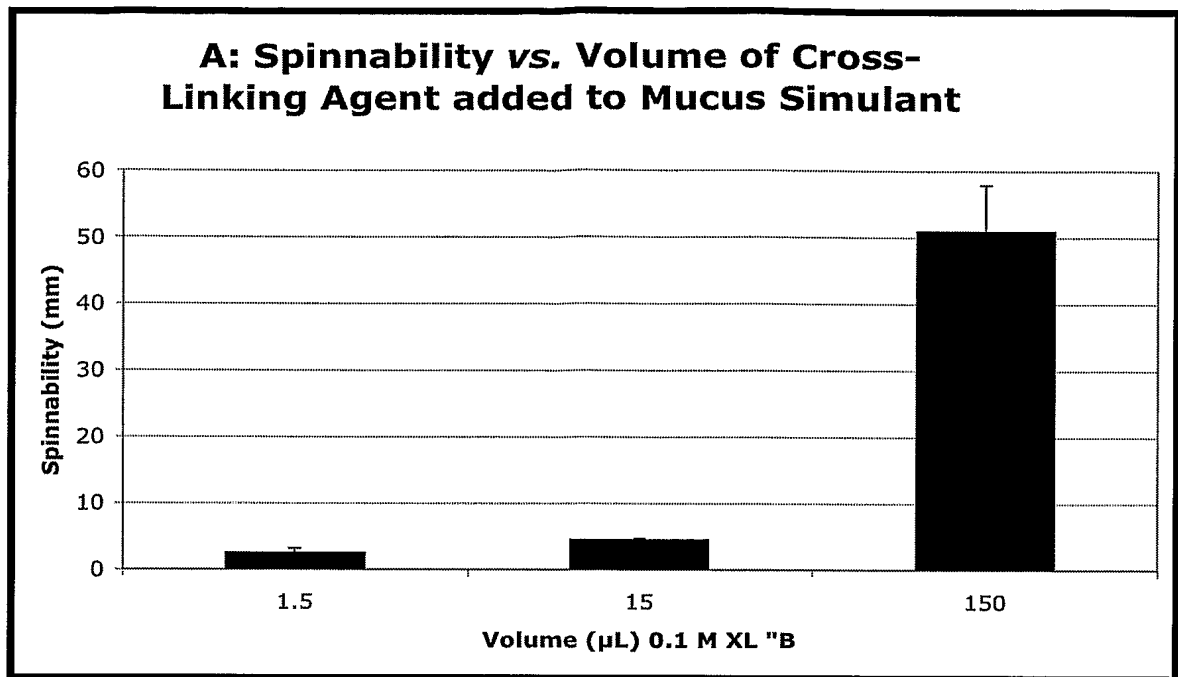
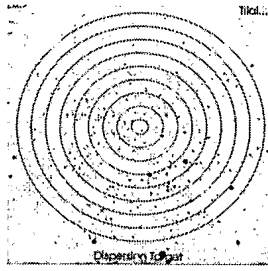
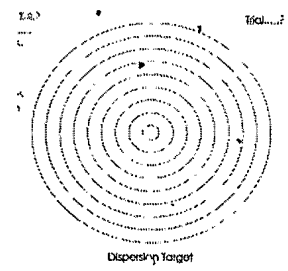


**B**



**FIGURE 4****A****B:**

**FIGURE 5**

**FIGURE 6****1.5 μl****15 μl****150 μl**

**FIGURE 7**